AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions of claims in the application.

Listing of Claims:

1 (Canceled):

2 (Currently Amended): An apparatus for improving residual stress of piping, which irradiates an outer surface of a T-piping with a laser beam emitted from a laser head, said T-piping comprising a first piping having one end welded and connected to a tubular circumferential surface of a second piping, and

comprising:

a circumferential-direction position adjusting structure for moving the laser head along a circumferential direction about a tubular axis of the first piping;

a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping;

a radial-direction position adjusting structure for moving the laser head along a radial direction of the first piping; and

an emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head,

wherein the circumferential-direction position adjusting structure includes a rail mounted on a surface of the first piping,

wherein the rail includes a ring shape surrounding a periphery of the first piping, and

wherein the circumferential-direction position adjusting structure further includes a cart travelling on the ring-shaped rail as a track.

3 (Currently Amended): An apparatus for improving residual stress of piping, which irradiates an outer surface of a T-piping with a laser beam emitted from a laser head, said T-piping comprising a first piping having one end welded and connected to a tubular circumferential surface of a second piping, and

comprising:

a circumferential-direction position adjusting structure for moving the laser head along a circumferential direction about a tubular axis of the first piping;

a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping;

a radial-direction position adjusting structure for moving the laser head along a radial direction of the first piping;

a first emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head; and

a second emission-direction adjusting structure for changing the emission direction of the laser beam in a plane intersecting the plane including the tubular axis of the first piping, by changing the direction of the laser head,

wherein the circumferential-direction position adjusting structure includes a rail mounted on a surface of the first piping,

wherein the rail includes a ring shape surrounding a periphery of the first piping, and

wherein the circumferential-direction position adjusting structure further includes a cart travelling on the ring-shaped rail as a track.

4 (Previously Presented): The apparatus for improving residual stress of piping according to claim 2 or 3, characterized in that

the laser head is provided in a laser head support portion so as to be moved in an oscillatory manner.

5 (Previously Presented): The apparatus for improving residual stress of piping according to claim 2 or 3, characterized in that

a plurality of the laser heads are provided in a laser head support portion.

6 (Cancelled):

7 (Currently Amended): The apparatus for improving residual stress of piping according to claim [[6]] 2 or 3, wherein the ring-shaped rail comprises two semi-arcuate rail members.

8 (New): The apparatus for improving residual stress of piping according to claim 2 or 3, wherein the cart travels along a circumferential surface of the ring-shaped rail.